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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,416	10/03/2003	Paul E. Gorday	CML01150J	1000

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MOTOROLA, INC.
1303 EAST ALGONQUIN ROAD
IL01/3RD
SCHAUMBURG, IL 60196

EXAMINER	
HO, CHUONG T	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,416	GORDAY ET AL.	
	Examiner	Art Unit	
	CHUONG T. HO	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment filed 08/09/06 have been entered and made of record.

2. Applicant's arguments with respect to claims 25-43 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 25-44 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 25-28, 30-31, 32-35, 37-38, 39-40, 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fei (U.S.Patent No. 2004/0067741 A) in view of Jones et al. (U.S.Patent No. 6,876,675 B1) and in further view of Parish et al. (U.S.5,930,243).

In the claim 25, Fei et al. disclose a system for compensation of frequency offset between a first wireless device (page. 1, [0005], first station) and the second wireless device (page 1, [0005], second station), the first wireless device and the second wireless device communicating in order to exchange data packet; transmitting a plurality of frequency synchronization bursts from the first wireless device to a second wireless device (see page 1, [0005] [0006] [0007] [0008] [0009]); transmitting at the center

frequency, one or more data packets to the second wireless device (see figure 1, page 2, [0027])

However, Fei is silent to disclosing each frequency contains bits identifying a frequency offset for the burst.

Jones, see figure 2, discloses these synchronization bursts have special frequency domain characteristics to facilitate receiver alignment to the transmitter's bursts timing and carrier frequency (see col. 3, lines 29-30); comprising:

- Transmitting a plurality of frequency synchronization bursts (see figure 2, col. 3, lines 28-30; each frequency synchronization burst contains bits representing frequency position information (see col. 5, lines 19-21, the use of a synchronization burst to acquire burst timing and frequency offset);

Both Fei and Jone disclose the synchronization bursts. Jone recognizes each frequency contains bits identifying a frequency offset for the burst. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Fei with the teaching of Jone to provide each frequency contains bits identifying a frequency offset for the burst in order to facilitate compensate the frequency offset.

However, the combined system (Fei – Jone) are silent to disclosing wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular, but differing frequency offset from a center frequency.

Parish et al. discloses wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular, but differing frequency

offset from a center frequency (see figure 3, col. 9, lines 55-60, the SYNCH burst, in which the known property is a known format, in order to estimate the time alignment, frequency offset, col. 10, lines 31-45);

Both Fei, Jones, and Parish disclose adjust the second transceiver device's operating frequency to match the frequency of the first transceiver device. Parish recognizes wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular and contains information (burst timing and frequency offset) regarding its particular frequency offset. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the the combined system (Fei – Jones) with the teaching of Parish to provide each synchronization burst which is transmitted at a different frequency offset in order to estimates the carrier frequency offset with respect to a second station and transmits signals that are responsive to the estimate carrier frequency offset.

5. In the claim 26, Jones discloses the synchronization burst also contain bits representing time position information (see col. 5, lines 29, the use of synchronization burst to acquire burst timing "time offset" and frequency offset) regarding a time offset.

6. Regarding to claim 27, Jones discloses transmitting a plurality of frequency synchronization bursts comprising: transmitting the plurality of frequency synchronization bursts in a suitable pattern; and transmitting bits representing frequency position information relative to each frequency synchronization bursts with respect to the data packets, the information being transmitted as a part of the frequency synchronization burst, the relative position of the frequency synchronization bursts (see

col. 3, lines 28-30) being determined in terms of the time and frequency (see col. 5, lines 31-35, lines 1-10).

7. Regarding to claim 28, Fei et al. discloses adjusting frequency of the second wireless device after the completion of an exchange of packets (see page, [0005] [0006] [0007] [0008] [0009]).

8. In the claim 30, Jones discloses wherein the frequency synchronization bursts are transmitted in a converging pattern (see col. 5, lines 36-40, the patterns is depicted in the frequency domain).

9. In the claim 31, Jones discloses wherein the frequency synchronization bursts are transmitted in a converging pattern (see col. 5, lines 36-40, the patterns is depicted in the frequency domain).

10. Regarding to claim 32, Fei et al. disclose a system for compensation of frequency offset between a first wireless device (page. 1, [0005], first station) and the second wireless device (page 1, [0005], second station), the first wireless device and the second wireless device communicating in order to exchange data packet; transmitting a plurality of frequency synchronization bursts from the first wireless device to a second wireless device (see page 1, [0005] [0006] [0007] [0008] [0009]); transmitting at the center frequency, one or more data packets to the second wireless device (see figure 1, page 2, [0027])

However, Fei is silent to disclosing each frequency contains bits identifying a frequency offset for the burst.

Jones, see figure 2, discloses these synchronization bursts have special frequency domain characteristics to facilitate receiver alignment to the transmitter's bursts timing and carrier frequency (see col. 3, lines 29-30); comprising:

- Transmitting a plurality of frequency synchronization bursts (see figure 2, col. 3, lines 28-30; each frequency synchronization burst contains bits representing frequency position information regarding its particular frequency offset (see col. 5, lines 19-21, the use of a synchronization burst to acquire burst timing and frequency offset);

Both Fei and Jone disclose the synchronization bursts. Jone recognizes each frequency contains bits identifying a frequency offset for the burst. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Fei with the teaching of Jone to provide each frequency contains bits identifying a frequency offset for the burst in order to facilitate compensate the frequency offset.

However, the combined system (Fei – Jone) are silent to disclosing wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular, but differing frequency offset from a center frequency.

Parish et al. discloses wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular, but differing frequency offset from a center frequency (see figure 3, col. 9, lines 55-60, the SYNCH burst, in which the known property is a known format, in order to estimate the time alignment, frequency offset, col. 10, lines 31-45);

Both Fei, Jones, and Parish disclose adjust the second transceiver device's operating frequency to match the frequency of the first transceiver device. Parish recognizes wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular and contains information (burst timing and frequency offset) regarding its particular frequency offset. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the the combined system (Fei – Jones) with the teaching of Parish to provide each synchronization burst which is transmitted at a different frequency offset in order to estimates the carrier frequency offset with respect to a second station and transmits signals that are responsive to the estimate carrier frequency offset.

11. In the claim 33, Parish discloses wherein the frequency synchronization burst is one burst from a plurality of plurality of synchronization bursts with each burst being transmitted at a particular, but differing frequency offset from the center frequency (see figure 3, col. 9, lines 57-60, col. 10, lines 33-45).

12. In the claim 34, claim 34 is rejected the same reason of claim 26 above.

13. In the claim 35, claim 35 is rejected the same reason of claim 27 above.

14. In the claim 37, claim 37 is rejected the same reason of claim 30 above.

15. In the claim 38, claim 38 is rejected the same reason of claim 31 above.

16. Regarding to claim 39, Fei et al. disclose a system for compensation of frequency offset between a first wireless device (page. 1, [0005], first station) and the second wireless device (page 1, [0005], second station), the first wireless device and the second wireless device communicating in order to exchange data packet;

transmitting a plurality of frequency synchronization bursts from the first wireless device to a second wireless device (see page 1, [0005] [0006] [0007] [0008] [0009]); transmitting at the center frequency, one or more data packets to the second wireless device (see figure 1, page 2, [0027])

However, Fei is silent to disclosing each frequency contains bits identifying a frequency offset for the burst.

Jones, see figure 2, discloses these synchronization bursts have special frequency domain characteristics to facilitate receiver alignment to the transmitter's bursts timing and carrier frequency (see col. 3, lines 29-30); comprising:

- Transmitting a plurality of frequency synchronization bursts (see figure 2, col. 3, lines 28-30; each frequency synchronization burst contains bits representing frequency position information regarding its particular frequency offset (see col. 5, lines 19-21, the use of a synchronization burst to acquire burst timing and frequency offset);

Both Fei and Jone disclose the synchronization bursts. Jone recognizes each frequency contains bits identifying a frequency offset for the burst. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Fei with the teaching of Jone to provide each frequency contains bits identifying a frequency offset for the burst in order to facilitate compensate the frequency offset.

However, the combined system (Fei – Jone) are silent to disclosing wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular, but differing frequency offset from a center frequency.

Parish et al. discloses wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular, but differing frequency offset from a center frequency (see figure 3, col. 9, lines 55-60, the SYNCH burst, in which the known property is a known format, in order to estimate the time alignment, frequency offset, col. 10, lines 31-45);

Both Fei, Jones, and Parish disclose adjust the second transceiver device's operating frequency to match the frequency of the first transceiver device. Parish recognizes wherein each frequency synchronization burst from the plurality of synchronization burst is transmitted at particular and contains information (burst timing and frequency offset) regarding its particular frequency offset. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the the combined system (Fei – Jones) with the teaching of Parish to provide each synchronization burst which is transmitted at a different frequency offset in order to estimates the carrier frequency offset with respect to a second station and transmits signals that are responsive to the estimate carrier frequency offset.

17. In the claim 40, claim 40 is rejected the same reason of claim 26 above.

18. In the claim 42, claim 42 is rejected the same reason of claim 30 above.

19. In the claim 43, claim 43 is rejected the same reason of claim 31 above.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. Claims 29, 36, 41, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Fei – Jones – Parish) in view of Alversalo et al. (U.S.Patent No. 2002/0186710 A1).

In the claims 29, 36, 41, 44, the combined system discloses the limitations of claim 25 above.

However, the combined system (Fei – Jones – Parish) is silent to disclosing transmitting frequency synchronization burst before a transmission of beacon packets, the transmission of beacon packets being executed by a network coordinate device.

Alversalo et al. discloses transmitting frequency synchronization burst before a transmission of beacon packets, the transmission of beacon packets being executed by a network coordinate device (see pages 5, 6, [0069]).

Both Fei, Jones, Parish, and Alversalo discloses synchronization burst, frequency offset. Alversalo recognizes transmitting frequency synchronization burst before a transmission of beacon packets, the transmission of beacon packets being executed by a network coordinate device. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Fei – Jones – Parish) with the teaching of Alversalo to transmit frequency synchronization burst before a transmission of beacon packets, the transmission of beacon packets being executed by

a network coordinate device in order to allocate data transmission resources in mobile communication system.

22. In the claim 36, claim 36 is rejected the same reason of claim 29 above.

23. In the claim 41, claim 41 is rejected the same reason of claim 29 above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

09/30/06